

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: LUMARK

Report Number: P197160

Luminaire Tested: **NAV-AF-06-D-UNV-SL4-8030-1200**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197160  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-06-D-UNV-SL4-8030-1200  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(6) 80 CRI, 3000K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV  
SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 30762 lumens  
Efficiency: N/A  
Efficacy: 80.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B2 - U0 - G5

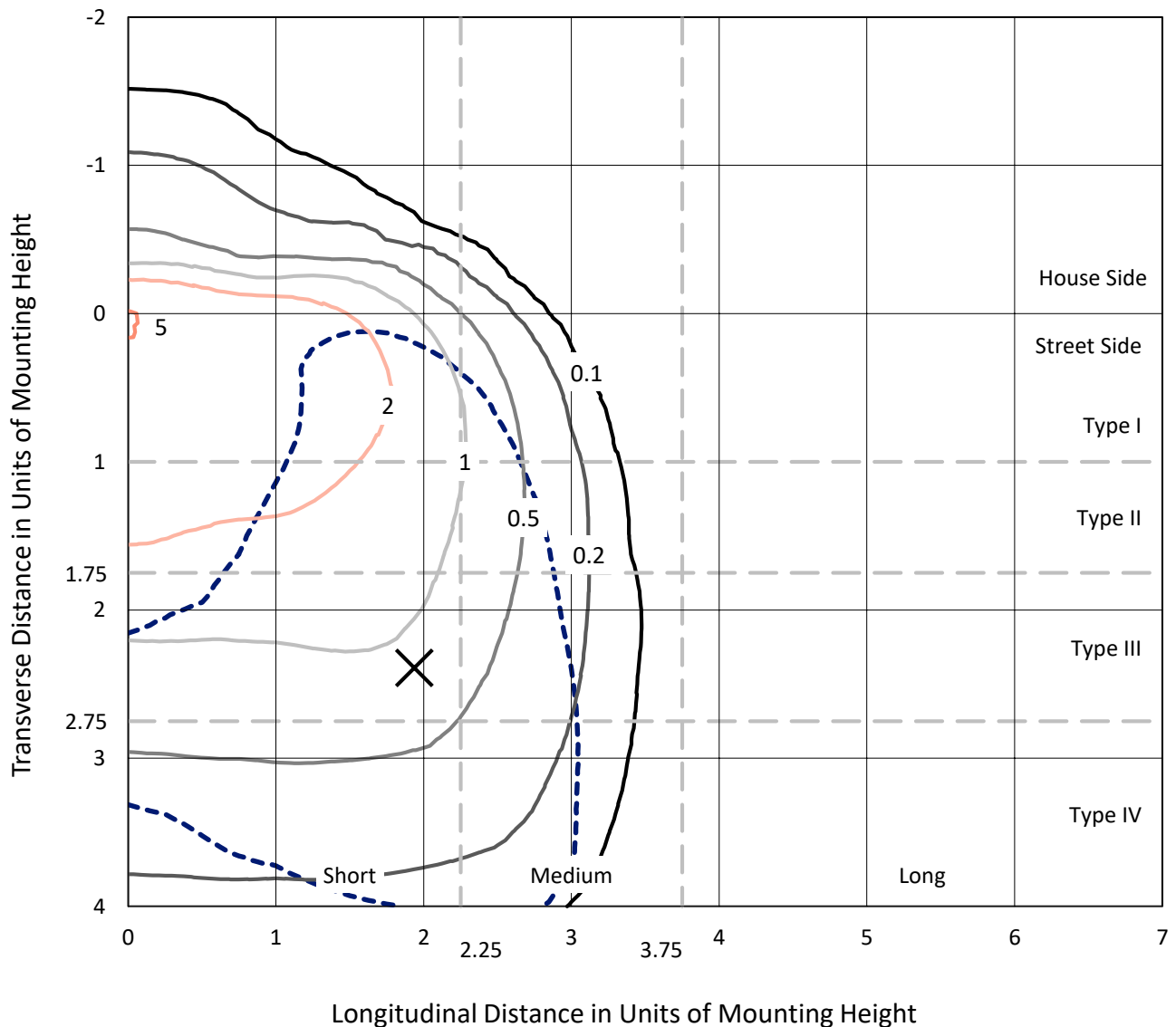
Input Watts (W): 382  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P197160  
 CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-1200

### Iso-Footcandle Lines of Horizontal Illumination

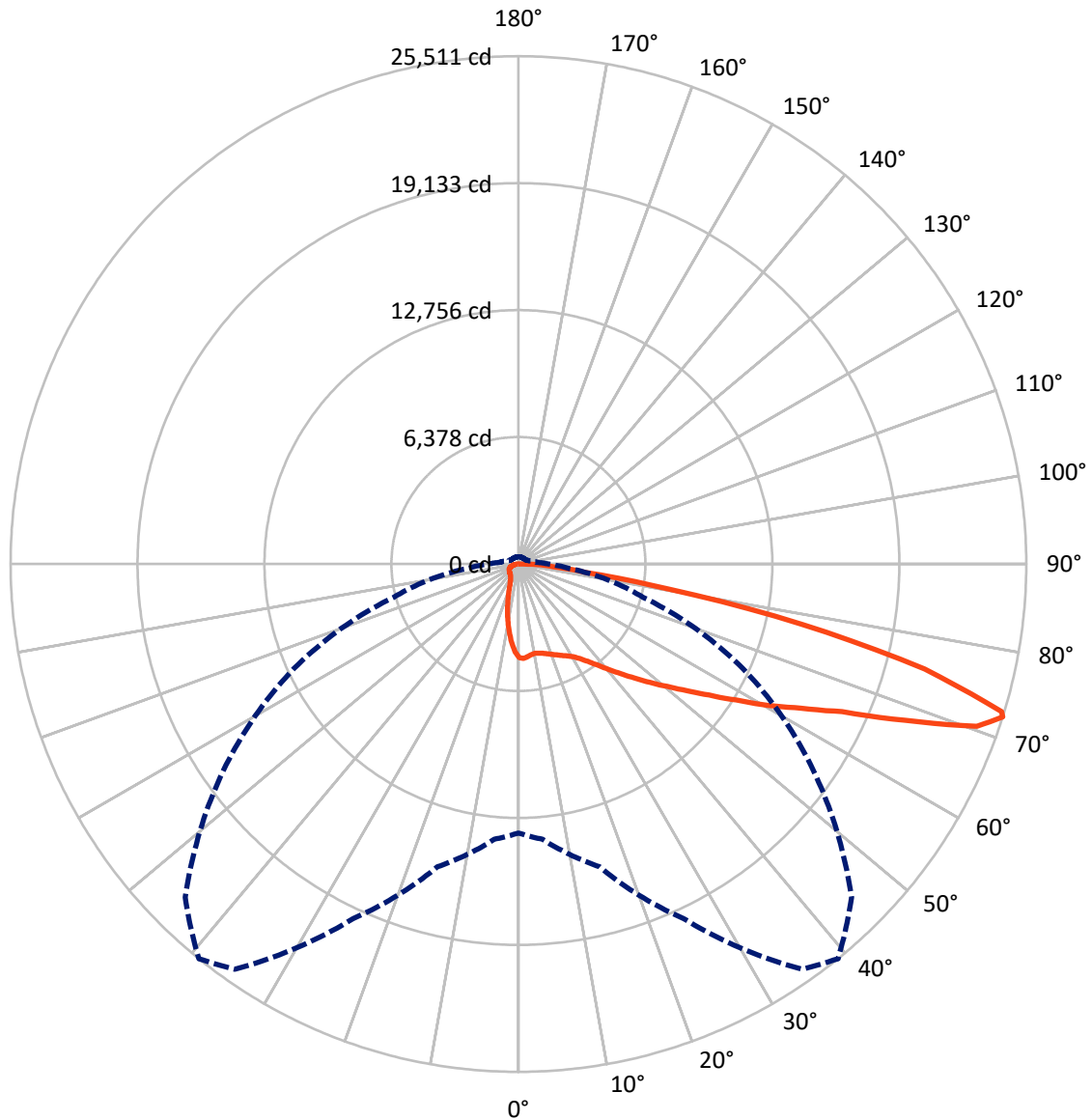
× Max cd  
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 5.2 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P197160  
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-1200

### Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral    - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER: P197160

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-1200

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	3527.3	0.0	3527.3
	% Fixture	11.5	0.0	11.5
<b>Street Side</b>	Lumens	27234.7	0.0	27234.7
	% Fixture	88.5	0.0	88.5
<b>Total</b>	Lumens	30762.0	0.0	30762.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	403.7	1.3
10°-20°	1014.5	3.3
20°-30°	1580.9	5.1
30°-40°	2434.1	7.9
40°-50°	3968.2	12.9
50°-60°	6166.1	20.0
60°-70°	8253.1	26.8
70°-80°	5935.2	19.3
80°-90°	1006.2	3.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	30762.0	100.0
0°-180°	30762.0	100.0



REPORT NUMBER: P197160

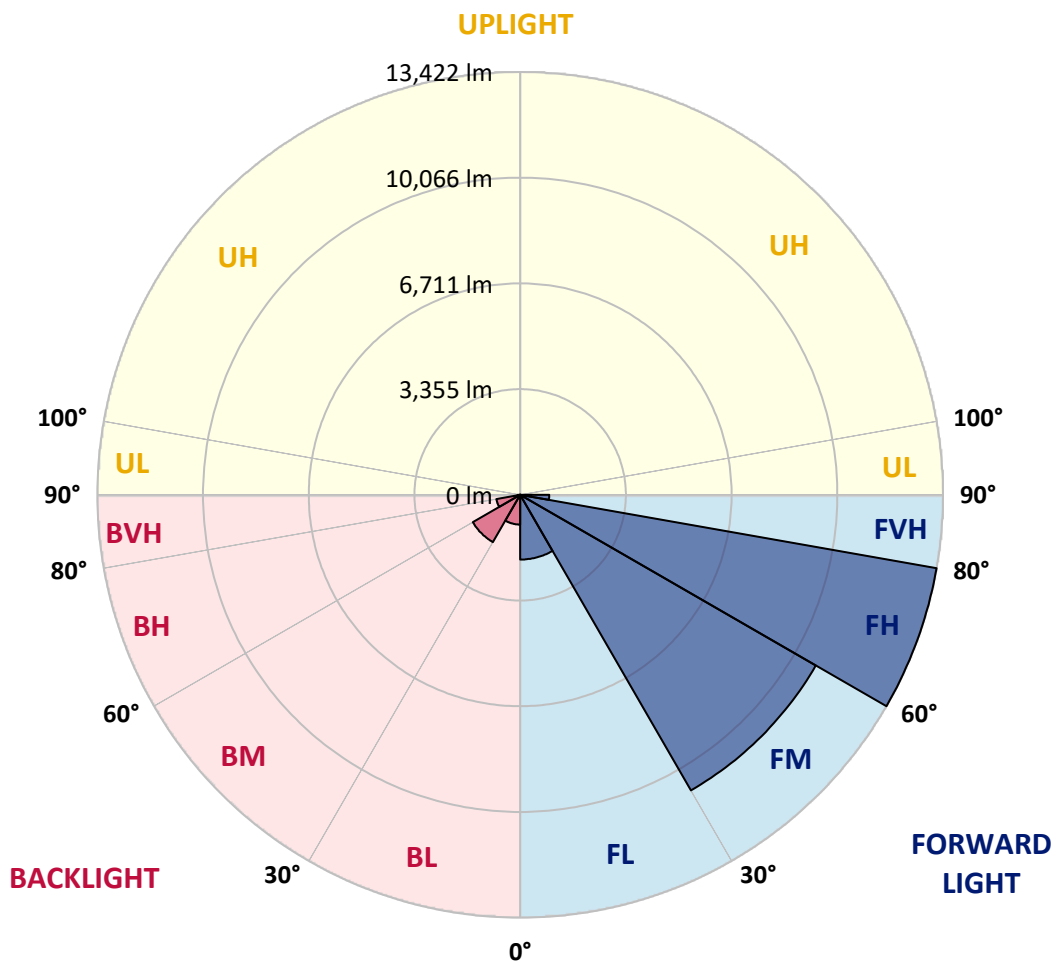
CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-1200

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	2054.8	6.7			
FM (30°-60°)	10835.0	35.2			
FH (60°-80°)	13421.9	43.6			G5
FVH (80°-90°)	923.0	3.0			G5
BL (0°-30°)	944.2	3.1	B2/1000		
BM (30°-60°)	1733.5	5.6	B2/2500		
BH (60°-80°)	766.4	2.5	B2/1000		G2/1000
BVH (80°-90°)	83.2	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G5**

Type IV Short





REPORT NUMBER: P197160

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-1200

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9
2.5°	4799.1	4801.2	4795.0	4776.4	4759.9	4751.6	4737.1	4712.4	4679.3	4656.6	4638.0
5°	4753.7	4759.9	4755.7	4724.8	4695.8	4679.3	4656.6	4621.5	4578.1	4559.6	4516.2
7.5°	4718.6	4722.7	4710.3	4675.2	4619.4	4598.8	4557.5	4512.1	4472.8	4446.0	4394.4
10°	4693.8	4697.9	4687.6	4652.5	4590.5	4565.7	4516.2	4466.6	4415.0	4382.0	4324.1
12.5°	4658.7	4666.9	4666.9	4650.4	4609.1	4592.6	4543.0	4489.3	4441.8	4406.7	4334.5
15°	4652.5	4662.8	4681.4	4679.3	4666.9	4654.5	4615.3	4561.6	4520.3	4479.0	4390.2
17.5°	4704.1	4726.8	4764.0	4776.4	4768.1	4741.3	4695.8	4646.3	4600.9	4561.6	4452.2
20°	4834.2	4846.6	4902.3	4927.1	4885.8	4846.6	4786.7	4722.7	4681.4	4650.4	4510.0
22.5°	5030.4	5046.9	5092.3	5094.4	5007.7	4960.2	4883.8	4805.3	4766.1	4753.7	4588.5
25°	5344.3	5340.1	5352.5	5300.9	5144.0	5088.2	4995.3	4904.4	4877.6	4902.3	4704.1
27.5°	5720.1	5709.8	5670.5	5536.3	5298.8	5226.6	5115.0	5034.5	5034.5	5092.3	4861.0
30°	6153.7	6143.4	6015.4	5790.3	5482.6	5400.0	5282.3	5197.6	5241.0	5352.5	5073.7
32.5°	6612.2	6575.0	6395.4	6093.9	5744.9	5654.0	5540.4	5453.7	5536.3	5726.3	5379.4
35°	7043.8	7023.1	6802.2	6444.9	6083.5	6007.1	5928.7	5821.3	5953.4	6248.7	5811.0
37.5°	7489.8	7473.3	7202.8	6822.8	6496.5	6444.9	6378.8	6304.5	6517.2	6905.4	6395.4
40°	7987.5	7954.4	7613.7	7233.7	6977.7	6952.9	6917.8	6897.2	7239.9	7818.1	7134.6
42.5°	8551.2	8487.2	8047.4	7686.0	7502.2	7522.9	7504.3	7586.9	8111.4	8871.3	8014.3
45°	9195.5	9067.5	8479.0	8167.1	8082.5	8165.1	8204.3	8414.9	9141.8	10087.6	8997.3
47.5°	9798.5	9633.3	8951.8	8689.6	8737.1	8879.6	8991.1	9362.8	10271.4	11289.4	10000.9
50°	10354.0	10168.1	9457.8	9230.6	9461.9	9664.3	9895.6	10420.1	11473.2	12526.4	10921.9
52.5°	10764.9	10630.7	9963.7	9821.2	10294.1	10562.6	10932.2	11595.1	12687.5	13705.5	11743.7
55°	11082.9	11010.7	10457.2	10498.5	11235.7	11619.8	12067.9	12829.9	13971.9	14762.8	12404.5
57.5°	11450.5	11396.8	11021.0	11316.3	12404.5	12887.8	13416.4	14263.1	15194.4	15694.1	12922.9
60°	11838.7	11838.7	11648.8	12301.3	13866.6	14420.0	14946.6	15605.3	16412.7	16532.5	13133.5
62.5°	12132.0	12208.4	12276.5	13350.3	15254.3	15941.9	16520.1	17152.0	17674.5	16945.5	12637.9
65°	12557.4	12720.5	13104.6	14562.5	16972.4	17872.7	18653.3	19184.0	18696.6	16617.2	11021.0
67.5°	13288.4	13530.0	14347.7	16367.3	19603.2	20951.6	21709.5	20792.6	18496.3	14550.1	8441.8
70°	13947.1	14287.8	15685.9	18657.4	23022.9	24422.9	24073.9	20418.9	16109.2	10665.8	5193.5
72°	13509.3	13881.0	15747.8	19654.8	24850.4	25511.2	23671.3	18095.7	12447.9	6508.9	2560.6
72.5°	13222.3	13608.5	15547.5	19630.0	24900.0	25372.8	23111.7	17172.7	11299.8	5695.3	2071.2
75°	11045.8	11376.2	13368.9	17397.8	21942.9	21075.5	18035.8	11113.9	5193.5	1839.9	1065.5
77.5°	7213.1	7465.0	9218.2	12053.5	15369.9	14535.6	10977.6	5203.8	1947.3	1117.2	801.2
80°	3624.1	3803.8	4933.3	6337.5	8295.2	7632.3	5067.5	2517.3	1303.0	807.4	629.8
82.5°	2521.4	2686.6	3397.0	3235.9	3467.2	3355.6	2383.0	2100.1	974.7	510.1	330.4
85°	2114.6	2286.0	2810.5	2306.6	1887.4	1720.2	1707.8	1984.5	644.3	251.9	278.8
87.5°	1844.1	2104.3	2319.0	1685.1	1294.8	1142.0	1257.6	1819.3	204.4	138.4	84.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P197160

CATALOG NUMBER: NAV-AF-06-D-UNV-SL4-8030-1200

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9	4697.9
2.5°	4607.0	4600.9	4569.9	4522.4	4487.3	4464.6	4421.2	4419.1	4423.3	4386.1	4400.5
5°	4477.0	4452.2	4371.6	4262.2	4173.4	4088.7	3995.8	3964.8	3938.0	3882.2	3888.4
7.5°	4340.7	4297.3	4156.9	3977.2	3805.8	3648.9	3494.0	3417.6	3359.8	3287.5	3287.5
10°	4260.1	4192.0	3977.2	3715.0	3442.4	3213.2	2981.9	2843.5	2742.3	2649.4	2643.2
12.5°	4256.0	4152.7	3853.3	3491.9	3118.2	2796.0	2480.1	2267.4	2116.6	2007.2	1996.9
15°	4289.0	4144.5	3750.1	3283.4	2812.6	2393.4	2003.1	1732.5	1540.5	1418.7	1406.3
17.5°	4317.9	4134.2	3638.6	3064.5	2515.2	2005.1	1571.5	1290.6	1108.9	1009.8	999.5
20°	4344.8	4111.4	3496.1	2833.2	2186.9	1641.7	1228.7	1001.5	881.8	826.0	819.8
22.5°	4384.0	4090.8	3347.4	2573.0	1864.7	1336.1	1013.9	850.8	786.8	759.9	755.8
25°	4448.0	4092.9	3202.8	2306.6	1569.4	1113.0	877.6	776.4	741.3	722.8	722.8
27.5°	4541.0	4117.6	3060.4	2036.1	1319.5	960.2	797.1	737.2	714.5	700.0	695.9
30°	4677.3	4163.1	2909.6	1780.0	1121.3	854.9	749.6	712.4	693.8	681.5	679.4
32.5°	4875.5	4243.6	2750.6	1546.7	970.6	780.6	714.5	691.8	677.3	667.0	664.9
35°	5170.8	4386.1	2595.7	1348.5	863.2	726.9	685.6	667.0	658.7	654.6	652.5
37.5°	5604.5	4615.3	2449.1	1193.6	793.0	691.8	656.7	646.3	642.2	642.2	642.2
40°	6149.6	4916.8	2316.9	1084.1	753.7	664.9	636.0	627.8	627.8	629.8	629.8
42.5°	6812.5	5294.7	2203.4	1009.8	731.0	646.3	621.6	617.4	615.4	615.4	617.4
45°	7582.7	5740.7	2133.2	952.0	714.5	636.0	611.2	609.2	600.9	596.8	596.8
47.5°	8357.1	6217.8	2129.0	918.9	693.8	623.6	600.9	600.9	584.4	576.1	578.2
50°	9079.9	6645.2	2174.5	910.7	681.5	605.0	590.6	592.7	569.9	559.6	557.6
52.5°	9662.2	6971.5	2230.2	921.0	681.5	588.5	572.0	582.3	557.6	545.2	543.1
55°	10112.4	7198.6	2250.9	943.7	689.7	574.1	555.5	572.0	553.4	536.9	536.9
57.5°	10434.5	7270.9	2162.1	954.0	702.1	572.0	539.0	569.9	559.6	539.0	539.0
60°	10316.8	6851.7	1831.7	914.8	700.0	567.9	526.6	574.1	580.3	557.6	557.6
62.5°	9397.9	5732.5	1470.3	826.0	664.9	553.4	512.1	569.9	594.7	586.5	582.3
65°	7650.9	4204.4	1139.9	720.7	605.0	522.4	481.1	532.8	561.7	569.9	572.0
67.5°	5391.8	2661.8	885.9	613.3	530.7	477.0	446.0	470.8	481.1	485.3	493.5
70°	2948.8	1441.4	704.2	516.3	454.3	431.6	408.9	410.9	406.8	402.7	406.8
72°	1480.6	941.6	594.7	448.1	402.7	388.2	377.9	371.7	371.7	365.5	367.6
72.5°	1274.1	875.6	574.1	431.6	390.3	377.9	369.6	363.4	361.4	357.2	359.3
75°	848.7	693.8	479.1	361.4	332.5	324.2	328.3	322.1	324.2	320.1	322.1
77.5°	685.6	596.8	406.8	305.6	285.0	272.6	280.8	282.9	287.0	282.9	280.8
80°	574.1	508.0	340.7	251.9	237.5	227.2	231.3	245.7	247.8	235.4	233.3
82.5°	371.7	408.9	268.5	196.2	181.7	177.6	187.9	202.4	206.5	190.0	185.9
85°	311.8	328.3	194.1	134.2	119.8	115.6	136.3	150.7	161.1	144.6	140.4
87.5°	86.7	161.1	95.0	64.0	53.7	53.7	66.1	78.5	92.9	95.0	95.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)